REMARKS

The Examiner rejected claims 8 and 10 under 35 U.S.C. 112, second paragraph, as being indefinite, stating that the Examiner cannot distinguish whether there are two or three different optical fibers within the claimed assembly of claims 8 and 10. Claims 8 and 10 recite "the external optical fiber", "an intermediate optical fiber" and "the optical fiber". The "external optical fiber" refers to that recited in claim 7 where the external optical fiber **47** is coupled to the optical fiber **28** referenced in claim 1. The intermediate optical fiber is situated between these two fibers, and each of these three fibers has a ferrule – input **42**, intermediate **46** and output **50** as shown in Figs. 7 and 8. The specification recites that the intermediate ferrule "contains an optical fiber corresponding to the fiber pigtail **28**", i.e., the "optical fiber" recited in claim 1 is the optical fiber of the fiber pigtail described in the specification and not the optical fiber in the intermediate ferrule cited in these claims. Clearly this indicates the three optical fiber configuration shown. Likewise claim 10 recites the same structure – an external optical fiber, an intermediate optical fiber and an optical fiber of the fiber pigtailed assembly with associated ferrules. Therefore Applicant submits that claims 8 and 10 are definite as particularly pointing out and distinctly claiming the subject matter which Applicant regards as the invention as described in the specification.

The Examiner further rejected claims 1-7 under 35 U.S.C. 103(a) over Jiang et al either in view of O'Donnell and further in view of Minamino et al or in view of Schmidt. Applicant respectfully traverses these non-obvious combinations suggested by the Examiner as not producing Applicant's claimed invention.

In contradistinction to Applicant's claimed invention Jiang et al describe a technique for achieving low back reflection only, as is discussed by Applicant on page 2, lines 11-14, namely tilting the surface of the optical detector relative to the input fiber. This may be achieved by either beveling the end of the fiber, tilting the detector, or a combination of both. There is no teaching or suggestion in Jiang et al that recognizes that such a technique for reducing back reflection causes polarization-dependent responsivity (PDR), as described by Applicant in the background of the specification.

O'Donnell teaches a method of aligning the birefringence axes of an optical component with a polarization sensitive component to reduce misalignment when optically coupling light from the fiber into the component. This is achieved by positioning an optical probe having a pair of detectors, one for each birefringence axis, and rotating the fiber until the desired alignment is achieved, at which point the probe is removed and the fiber linearly moved to optically couple with the polarization sensitive component. Note that the light is normally incident from the fiber on the component so there would be back reflection. Also such rotation is not necessary where the light is being coupled to a detector as the detector is not a "polarization sensitive component." The rotation recited in claim 1 is to reduce the cause of the polarization-dependent responsivity caused by the beveled surfaces, not to align birefringence axes. PDR is unrelated to birefringence, i.e., such alignment as taught by O'Donnell does not reduce the cause of PDR. There is no reason why one of ordinary skill in the art would combine this teaching by O'Donnell with that of Jiang et al "to produce essentially zero polarization-dependent responsivity *and* low back reflection" (emphasis added) as recited in claim 1. In fact

such a combination causes PDR rather than minimizes it. It is the fact that the respective beveled surfaces are not parallel to each other, but rather are closer to orthogonally related as taught by Applicant, that minimizes the cause of the PDR. Thus claim 1 and claims dependent therefrom are deemed to be allowable as being nonobvious to one of ordinary skill in the art over Jiang et al in view of O'Donnell, Minamino et al and/or Schmidt.

With respect to claim 7 Applicant again recites that the coupling between the opposing end of the optical fiber and an external optical fiber is done "with low back relection *and* minimum polarization-dependent responsivity." (Emphasis added) Schmidt shows butting a beveled end 40 of an external fiber 30 with an opposing beveled end 40 of an optical fiber 20 having a beveled surface 50 adjacent a detector 60. The planes of the two beveled interfaces are parallel, and the bevels are to reduce back reflection. However the configuration shown by Schmidt causes PDR rather than minimizes it. Therefore the combination of Jiang et al with Schmidt does not both provide "low back reflection and minimum polarization-dependent responsivity." Thus claim 7 also is deemed to be allowable as being nonobvious to one of ordinary skill in the art over Jiang et al in view of Schmidt.

In view of the foregoing amendment and remarks allowance of claims 1-11 is urged, and such action and the issuance of this case are requested.

Respectfully submitted,

DUWAYNE R. ANDERSON

TEKTRONIX, INC.
P. O. Box 500, MS 50-LAW
Beaverton, Oregon 97077
(503) 627-7261

By Francis I. Gray
Francis I. Gray
Reg. No. 27,788
Attorney for Applicant

7249 US